

ABSTRACT

5 The present invention relates to the discovery, identification and
characterization of nucleotides that encode novel substrate-targeting subunits of ubiquitin
ligases. The invention encompasses nucleotides encoding novel substrate-targeting
subunits of ubiquitin ligases: FBP1, FBP2, FBP3, FBP4, FBP5, FBP6, FBP7, FBP8, FBP9,
FBP10, FBP11, FBP12, FBP13, FBP14, FBP15, FBP16, FBP17, FBP18, FBP19, FBP20,
10 FBP21, FBP22, FBP23, FBP24, and FBP25, transgenic mice, knock-out mice, host cell
expression systems and proteins encoded by the nucleotides of the present invention. The
present invention relates to screening assays that use the novel substrate-targeting subunits
to identify potential therapeutic agents such as small molecules, compounds or derivatives
and analogues of the novel ubiquitin ligases which modulate activity of the novel ubiquitin
15 ligases for the treatment of proliferative and differentiative disorders, such as cancer, major
opportunistic infections, immune disorders, certain cardiovascular diseases, and
inflammatory disorders. The invention further encompasses therapeutic protocols and
pharmaceutical compositions designed to target ubiquitin ligases and their substrates for the
20 treatment of proliferative disorders.